# Catering Management System - Enhanced Model Design

## 1. Overview

This document presents an enhanced and scalable structure for the Catering Management System. It includes optimized data models, additional attributes, and implementation-level recommendations for a production-ready application.

## 2. Models

### 2.1 Employee Model

Fields:  
- Employee Name  
- Employee Designation (Editable)  
- Employee Type (Admin, Manager, Employee, Driver, Worker)  
- Email, Phone, Location  
- Skills & Specialities  
- Joining Date  
- Employee ID (Auto Generated)  
- Assigned Projects (Event Name or N/A)  
- Status (Active / OnLeave)  
- Profile Image  
- Availability (Boolean)  
- Salary  
- Role Permissions  
- Password (Default: EmployeeID)

### 2.2 Inquiry Model

Fields:  
- Client Name  
- Event Name  
- Email, Phone, Event Date, Budget  
- Message, No. of Guests  
- Status (New, Contacted, Replied)  
- Source (Website, Walk-in, Call)  
- Follow Up Date  
- Type (New / Contacted)

### 2.3 Pending Booking Model

Fields:  
- Event Name  
- Client Details (Name, Email, Phone)  
- Venue, Note  
- Days to Event, Priority (High, Mid, Low)  
- Estimated Amount, Menu Requested  
- Booking ID (Auto Generated)  
- Decline Reason (if Declined)  
- Manager Assigned  
- Created By (Admin/Manager)

### 2.4 Booked (Confirmed) Model

Fields:  
- Event Name, Client Name  
- Total Amount, Deposited, Balance  
- Date & Time (From – To)  
- Venue, No. of Guests  
- Menu Included (Photography, Catering, Decoration, etc.)  
- Booking ID (Auto Generated)  
- Booking Status (Confirmed, In Progress, Completed, Cancelled)  
- Payment Status (Paid, Partially Paid, Unpaid)  
- Assigned Staff, Assigned Chefs, Assigned Vehicles  
- Timeline (Work progress log)

### 2.5 Completed Model

Fields:  
- Event Name, Client Name  
- Customer Rating (Out of 5)  
- Feedback, Completion Date  
- Menu Delivered, Booking ID (CM00\_)  
- Payment Type (Fully Paid, Partially Paid, Not Paid)  
- Completion Report  
- Service Issues  
- Attachments (Photos, Documents)

### 2.6 Menu Model

Fields:  
- Item Name, Small Description  
- Per Serving Amount, Type (Veg / Non-Veg)  
- Category (Appetizer, Main Course, Dessert, Beverage)  
- Ingredients, Preparation Time  
- Tags (Vegan, Spicy, Signature Dish)  
- Is Available (Boolean)

### 2.7 Store Model

Fields:  
- Item Name, Item Type (Photography, Sound, etc.)  
- Current Stock, Unitwise Cost  
- Supplier Name, Contact, Email  
- Last Restocked, Last Used  
- Total Value = Current Stock × Unitwise Cost  
- Reorder Level  
- Unit (kg, pcs, liters)  
- Item ID (Auto Generated)

### 2.8 Progress / Assigned Work Model

Fields:  
- Event Name, Client Name  
- Progress Type (Pending, In Progress, Overdue)  
- Priority (High, Mid, Low)  
- Assigned To (Lead Name)  
- Due Date, Progress Updates  
- Remarks, Attachments, Progress History

## 3. Technical Recommendations

- Use ObjectId references between models for scalability.  
- Add timestamps: { timestamps: true } to all Mongoose schemas.  
- Use enums for consistent validation of status, priority, etc.  
- Add isDeleted (Boolean) for soft deletes.  
- Implement auto-generated IDs with pre-save hooks.  
- Maintain Activity Logs for all major actions.

## 4. Bonus Features to Consider

- Notification System (Email/SMS alerts)  
- AI-based Menu Recommendation System  
- Dashboard Analytics for Admin  
- Customer Feedback Portal  
- Vehicle Management System  
- PDF Invoice Generation